

O-0302
LOCATE A DISTRESS BEACON

CONDITIONS

You are a member of a ground team searching for a distress beacon (ELT/EPIRB). You have been given the task of operating the detection finding (DF) equipment. You have used the direction finding (DF) technique to close in on the signal, and now you know the distress beacon is nearby.

OJECTIVES

Within 30 minutes, use signal strength techniques to locate a practice beacon located within 200 meters of your location. (This is for a wooded area. More time should be allotted for an urban or airport environment).

TRAINING AND EVALUATION

Training Outline

1. Once the team has moved close to the distress beacon using the DF technique, that technique may become less effective. You know you are close when the signal is loud even with the sensitivity turned down. At this point signal strength techniques may be used easily. There are two techniques - normal signal strength and body blocking. These techniques can be used with DF equipment, or any portable radio or scanner that can pick up the distress beacon frequency (121.775 for practice, 121.5 and 243 for civilian and military distress beacons respectively).

2. To locate the distress beacon:

a. Assemble the DF gear or radio and tune to the appropriate frequency. Use a short antenna (such as a “rubber duck” flexible antenna). Ensure you can hear the signal of the distress beacon. Adjust the sensitivity and volume so that you can barely hear the signal.

b. Body Blocking. To determine a bearing to the distress beacon, place the receiver at waist level and rotate in a circle until weakest signal is heard. At this point the target distress beacon should be directly behind you, since your body is blocking the signal from the distress beacon.

c. Signal Strength. If you are sure the distress beacon is located nearby (for example, if you are at an airfield and you are sure it is in one of the planes) simple walk through the area.. As the signal strength increases rapidly, you are getting closer to the distress beacon. Decrease the sensitivity (or increase squelch), reduce the antenna height or slightly offset the receiver frequency as you get closer to permit body-blocking.

Additional Information

More detailed information on this topic is available in Chapter 6 of the Ground Team Member & Leader Reference Text.

Evaluation Preparation

Setup: Hide a practice beacon transmitting on the practice frequency approximately 200 meters from the test site. Take a set of DF equipment, and ensure that one can get a good strong signal to the practice beacon. Disassemble the DF equipment and give it to the student. The evaluator should be prepared to document the time it takes each student to locate the practice beacon. If multiple students have difficulty locating the practice beacon within the time allotted, the evaluator may need to re-evaluate students or the time allotted based on location.

Brief Student: Tell the student to locate the practice beacon within 30 minutes (add more time if the practice beacon is in an urban or airport environment).

Evaluation

Performance measures

Results

Within 30 minutes the individual:

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| 1. Correctly puts the DF equipment into operation. | P | F |
| 2. Locates the distress beacon/practice beacon within 30 minutes (more may be needed for urban/airport searches) | P | F |

Student must receive a pass on all performance measures to qualify in this task. If the individual fails any measure, show what was done wrong and how to do it correctly.